

FTHC02 temperature humidity controller manual

■ Summary:

Temperature and humidity control adopt high-reliability microprocessors, high-performance digital temperature and humidity sensor, combined by intelligent software control technology. The controller has strong anti-interference ability, high control precision, flexible control mode, according to different temperature and humidity control needs, can separately set the upper and lower limits of temperature and humidity, control hysteresis, control mode, and can effectively prevent some Electric equipment operation incidents, which caused by high environmental temperature or condensation, can achieve dehumidification, heating, and anti-condensation control automation. The temperature and humidity controller was chronically sued by the Design Institute of power design department, power equipment manufacturing plant and the power company, with characteristics of completely reliable, easy to install, maintenance-free, long-term stable operation etc. Can be widely used in various types of power cabinet (High and low voltage switchgear, box-type substation, ring main unit, operating mechanism boxes, etc.) facilities, as well as a variety of construction, shipbuilding, storage and other temperature and humidity control requirements of the occasion.

■ Technical parameters:

Supply voltage: AC220V, 50/60Hz

Temperature control range: 0.0-99.9°C

Temperature accuracy: $\pm 0.5^{\circ}\text{C}$

Temperature difference: 0-9°C

Humidity control range: 0%-99.9%RH

Humidity accuracy: $\pm 5\%RH$

Humidity difference: 0-9%RH

Power consumption: 2W max

Input sensor cable length: 3m, 5m

Output types: 2 SPST-NO electromagnetic relays

Relay contact rating: 5A at 250Vac

External dimensions: 48x48x70mm

Perforate dimensions: 45x45mm

Mounting: Panel, din rail

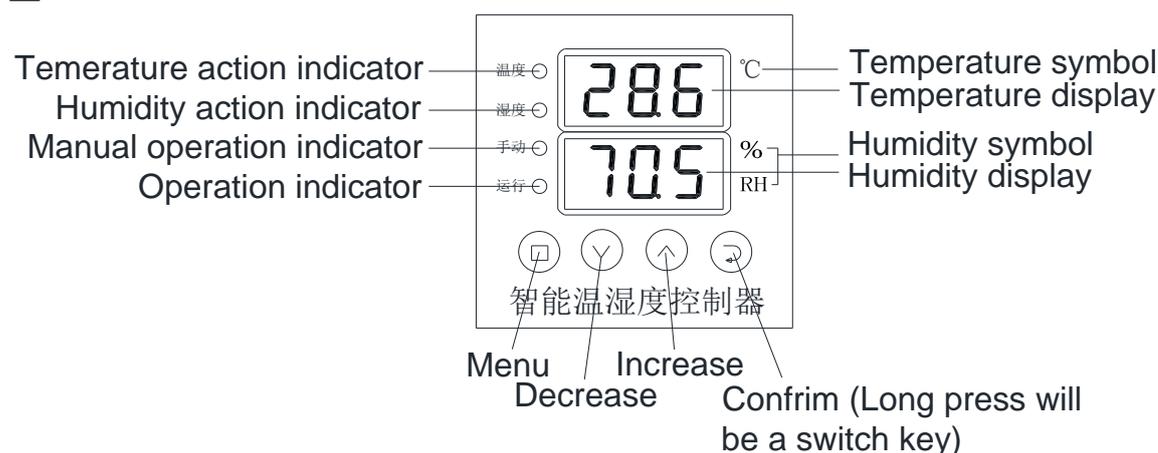
Insulation resistance: 500M ohm min

Withstand voltage: 2KV 50Hz for 1min, no breakdown and flashover phenomenon

Operating temperature: -25 to 70 °C

Operating humidity: 95% RH max, non-condensing

■ Nomenclature:

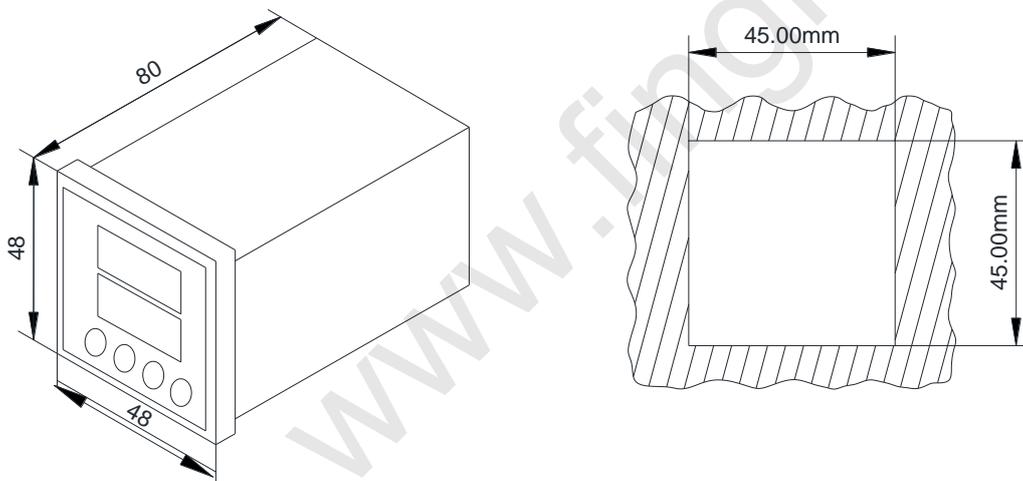


■ Menu parameters

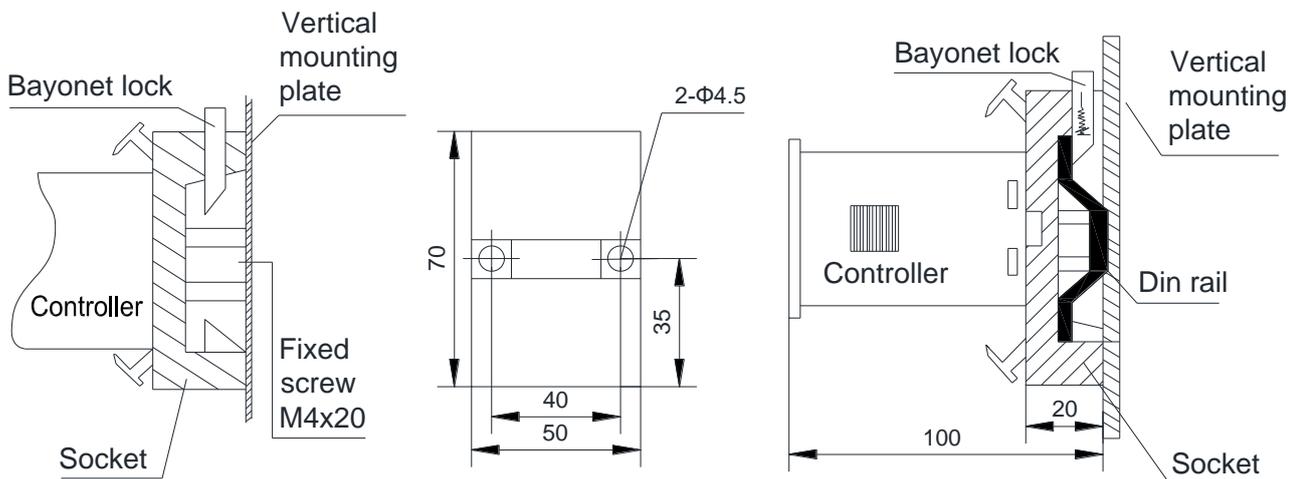
Symbol	Definition	Description
CLP	password	When input right password, then can enter to program, default is 1
AL1	Temperature action point	When measured temperature reach to the set value, relay will be switched on
AH1	Temperature difference	When relay switch on, it will not switch off in the temperature difference range
SL1	Temperature alarm type	When SL1=1, it is heating alarm When SL1=2, it is cooling alarm
AL2	Humidity action point	When measured humidity reach to the set value, relay will be switched on
AH2	Humidity difference	When relay switch on, it will not switch off in the humidity difference range
SL2	Humidity alarm type	When SL2=1, it is humidification alarm When SL2=2, it is dehumidifying alarm
r	Manual operation	When r=0, manual unlock When r=9, system unlock automatically

■ Dimensions (Unit: mm)

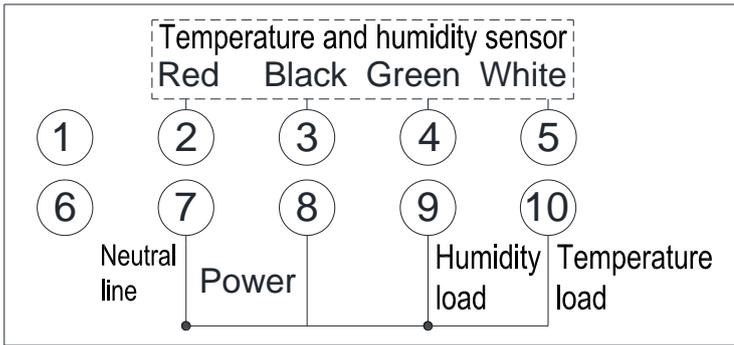
1. Panel mounting type



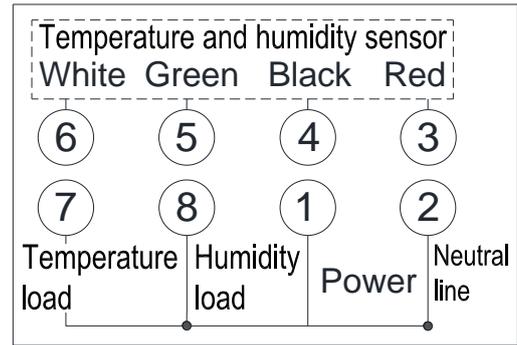
2. Din rail mounting type



■ Wiring diagram:



Panel mounting



Din rail mounting

Note: The wiring diagram on the manual may be different from the actual wiring method. Please refer to the wiring diagram on the controller.

■ Operation method:

<p>1. Press to confirm after changing parameter</p> <p>2. When set all parameters, press down for several seconds, then will return to measuring stats.</p> <p>3. When in setting stats, if don't press any key for 8S, will return to measuring stats automatically.</p> <p>4. Press down for 3s, manual operating start, mean manual unlock, if unlock time is 9s, will restore to automatical operation stats after 9s.</p> <p>* Manual operation is a customized function</p>	<table border="0"> <tr> <td>Temperature alarm</td> <td> AL1 AL1 </td> </tr> <tr> <td>Temperature alarm value</td> <td> 100 200</td> </tr> <tr> <td>Temperature difference</td> <td> AH1 AH1 </td> </tr> <tr> <td>Temperature difference value</td> <td> 50 60</td> </tr> <tr> <td>Temperature alarm type</td> <td> SL1 SL1 </td> </tr> <tr> <td>Lower limit (heating temperature) alarm</td> <td> 1 2</td> </tr> <tr> <td>Upper limit (cooling temperature) alarm</td> <td></td> </tr> <tr> <td>Humidity alarm</td> <td> AL2 AL2 </td> </tr> <tr> <td>Humidity alarm value</td> <td> 800 900</td> </tr> <tr> <td>Humidity difference</td> <td> AH2 AH2 </td> </tr> <tr> <td>Humidity difference value</td> <td> 50 60</td> </tr> <tr> <td>Humidity alarm type</td> <td> SL2 SL2 </td> </tr> <tr> <td>Upper limit (dehumidifying) alarm</td> <td> 2 1</td> </tr> <tr> <td>Upper limit (heating humidification) alarm</td> <td></td> </tr> <tr> <td>Manual operation</td> <td> 7 7 </td> </tr> <tr> <td>Unlock time</td> <td> 0 9</td> </tr> <tr> <td>Restore to automatical operation after 9S</td> <td></td> </tr> </table>	Temperature alarm	AL1 AL1	Temperature alarm value	100 200	Temperature difference	AH1 AH1	Temperature difference value	50 60	Temperature alarm type	SL1 SL1	Lower limit (heating temperature) alarm	1 2	Upper limit (cooling temperature) alarm		Humidity alarm	AL2 AL2	Humidity alarm value	800 900	Humidity difference	AH2 AH2	Humidity difference value	50 60	Humidity alarm type	SL2 SL2	Upper limit (dehumidifying) alarm	2 1	Upper limit (heating humidification) alarm		Manual operation	7 7	Unlock time	0 9	Restore to automatical operation after 9S	
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■ Parameter setting instance

Temperature:

Example 1: heating when below 20°C, then stop when equal to 30, you can set AL1=20, AH1=10, SL1=1

Example 2: cooling when above 40°C, then stop when equal to 30, you can set AL1=30, AH1=10, SL1=2

Humidity:

Example 3: dehumidifying when above 80%, then stop when equal to 60%, you can set AL2=60, AH2=20, SL2=2

Example 4: humidification when below 50%, then stop when equal to 70%, you can set AL2=50, AH2=20, SL2=1

■ Setting example:

1, The temperature output relay switch on when the temperature is higher than 35.6 °C, and switch off when lower than 33.6°C, the humidity output relay switch on when the humidity is higher than 75.2%RH, and switch off when lower than 70.2% RH. Can set it as following:

Special Reminder: Do not immerse the humidity sensor directly into the water or drip it, spray high temperature steam! ! Otherwise, easily lead to humidity sensor short circuit, the controller will not start up normally.